

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

52



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,594	04/16/2001	Michael H. Myers	20-0156	3063

7590 08/02/2004
 Robert W. Keller
 TRW Inc.
 Law Dept.
 One Space Park, Bldg. E2/6051
 Redondo Beach, CA 90278

EXAMINER

MEEK, JACOB M

ART UNIT	PAPER NUMBER
----------	--------------

2637

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,594

Applicant(s)

MYERS, MICHAEL H.

Examiner

Jacob Meek

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1 - 27 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Review of the independent claims reveals the following equation is disclosed in all of the independent claims: $D_k = \{(\tanh(Cx_k)) / Cx_k \} e^{-jM_k}$, where $M_k = (Bx_k \tanh(Cx_k)) / 6$, x_k is the magnitude of the sample k , and C is a scaling factor. The definition and use of variable B is not defined in the claims, specification or drawings. Also, the term M_k while defined in the claim does not appear to be discussed in the specification or drawings. Resolution of these inconsistencies will need to be addressed.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1, 7, 15, 22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 - 40 of U.S. Patent No. 6,751,268 in view of Ichihara (US Patent 6,587,513). The claims in US Patent 6,751,268 are somewhat silent on the subject of correction of phase distortion of the amplifier, however, the need for gain and phase compensation is widely known in the art and is taught in Ichihara (column 2, lines 40 – 57 and Figure 5).

Claim 1 corresponds to claim 1 of U.S. Patent No. 6,751,268. Although the conflicting claims are not identical, they are not patentably distinct from each other because Claim 1 of application recites the full definition of variables in the claim rather than merely stating variable names as in the patent. D_k is defined in the granted patent as $D_k = (\tanh(Cu_k))/Cu_k$. The element e^{-jMk} in Claim 1 is a description of the phase compensation component that is described by Ichihara. The up-conversion of the signal is an inherent part of converting a baseband signal to an RF signal and does not require specific explanation.

Claim 7 corresponds to elements described in Claim 7 of U.S. Patent No. 6,751,268. Although the conflicting claims are not identical, they are not patentably distinct from each other because Claim 1 of application recites the full definition of variables in the claim rather than merely stating variable names as in the patent. D_k is defined in the granted patent as $D_k = (\tanh(Cu_k))/Cu_k$. The element e^{-jMk} in Claim 7 is a

description of the phase compensation component that is described by Ichihara. The up-conversion of the signal is an inherent part of converting a baseband signal to an RF signal and does not require specific explanation.

Claim 15 corresponds to claim 21 of U.S. Patent No. 6,751,268. Although the conflicting claims are not identical, they are not patentably distinct from each other because Claim 1 of application recites the full definition of variables in the claim rather than merely stating variable names as in the patent. D_k is defined in the granted patent as $D_k = (\tanh(Cu_k))/Cu_k$. The element e^{-jMk} in Claim 1 is a description of the phase compensation component that is described by Ichihara. The up-conversion of the signal is an inherent part of converting a baseband signal to an RF signal and does not require specific explanation.

Claim 22 corresponds to claim 29 of U.S. Patent No. 6,751,268. Although the conflicting claims are not identical, they are not patentably distinct from each other because Claim 1 of application recites the full definition of variables in the claim rather than merely stating variable names as in the patent. D_k is defined in the granted patent as $D_k = (\tanh(Cu_k))/Cu_k$. The element e^{-jMk} in Claim 1 is a description of the phase compensation component that is described by Ichihara. The up-conversion of the signal is an inherent part of converting a baseband signal to an RF signal and does not require specific explanation.

Drawings

2. The drawings (Figure 1) are objected to under 37 CFR 1.83(a) because they fail to show term (-8, feedback gain?) as described in the specification (paragraph 0019,

line 13 and paragraph 0025, line 4). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or

verbose terms used in the specification are: -8. As described in rejection and objections above there are inconsistencies in the disclosure of the invention. It appears that there are typos that have occurred in the specification, drawings and claims that have created inconsistencies between them.

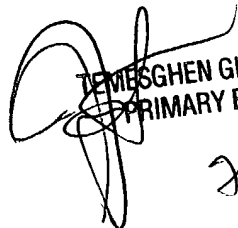
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (703) 305-8953. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (703) 308-7728. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM


TEMESGHEN GHEBRETINSAE
PRIMARY EXAMINER
2/2/04